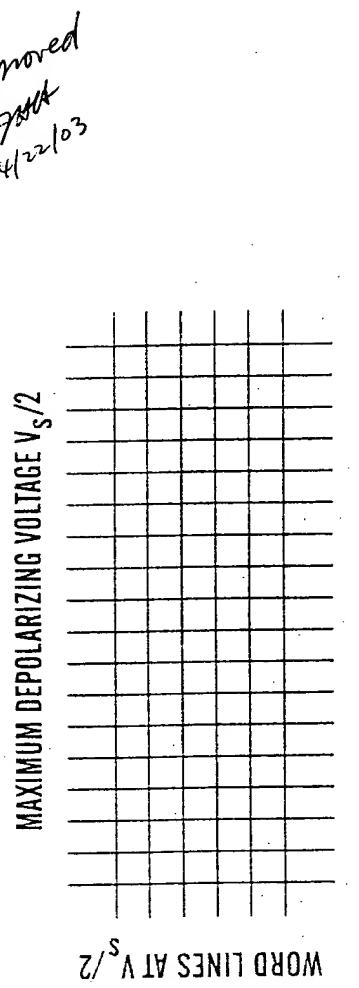
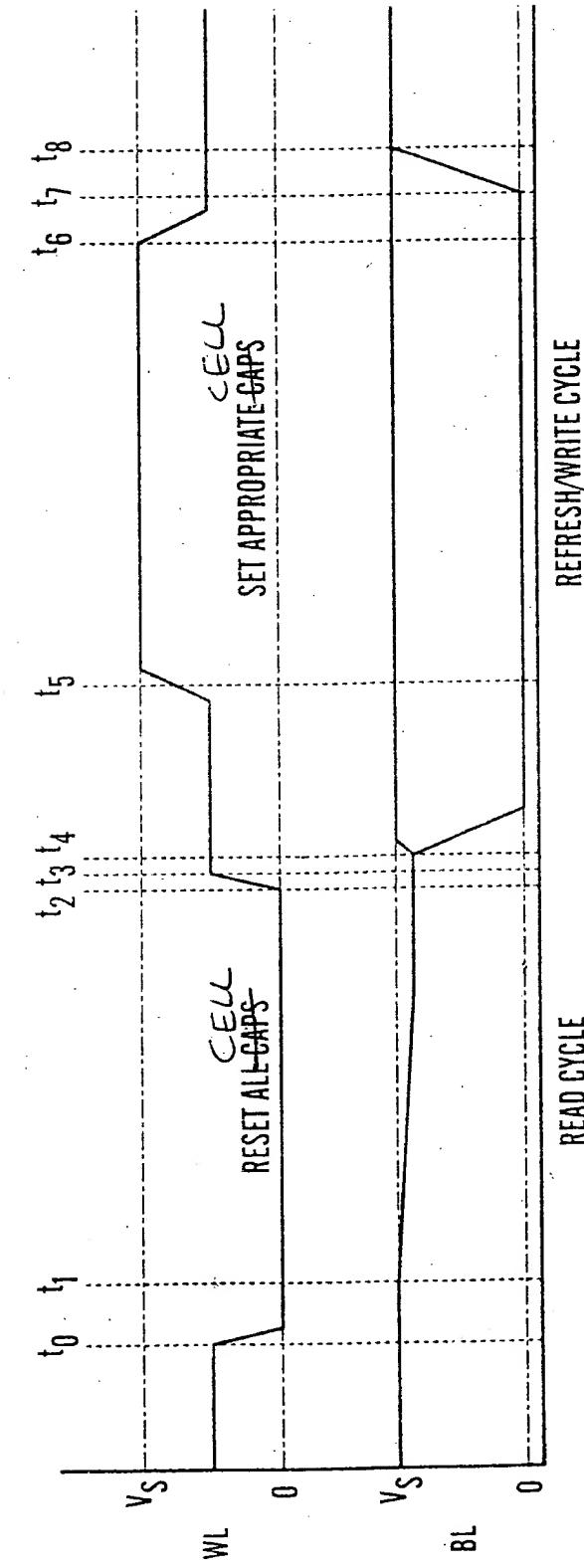




- $t_0$ : WORD LINE LATCHED, ACTIVE PULLDOWN TO 0
- $t_1$ : BIT LINE CLAMP RELEASED - SENSE AMP ON
- $t_2$ : BIT LINE DECISION - DATA LATCHED
- $t_3$ : WORD LINE RETURNED TO QUIESCENT  $V_s/2$
- $t_4$ : WRITE DATA LATCHED ON BIT LINES
- $t_5$ : WORD LINE PULLED TO  $V_s$  - SET/RESET-GAPS CELL
- $t_6$ : WORD LINE RETURNED TO QUIESCENT  $V_s/2$
- $t_7$ : BIT LINES ACTIVELY RETURNED TO  $V_s$  CLAMP
- $t_8$ : READ/WRITE CYCLE COMPLETE



SENSE AMPS BIASED NEAR  $V_s$



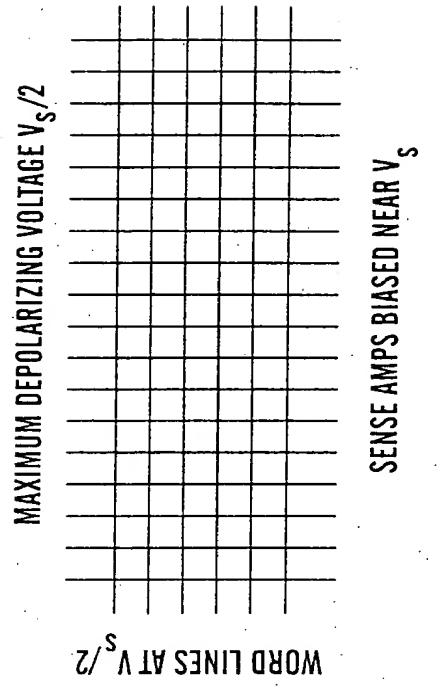
REFRESH/WRITER CYCLE

Fig. 4



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- $t_0$ : WORD LINE LATCHED, ACTIVE PULL UP TO  $V_s$
- $t_1$ : BIT LINE CLAMP RELEASED - SENSE AMP ON
- $t_2$ : BIT LINE DECISION - DATA LATCHED
- $t_3$ : WORD LINE RETURNED TO QUIESCENT  $V_s/2$
- $t_4$ : WRITE DATA LATCHED ON BIT LINES
- $t_5$ : WORD LINE PULLED TO 0 - SET/RESET GAPS  $\subset \mathcal{E}_{LL}$
- $t_6$ : WORD LINE RETURNED TO QUIESCENT  $V_s/2$
- $t_7$ : BIT LINES ACTIVELY RETURNED TO 0 CLAMP
- $t_8$ : READ/WRITE CYCLE COMPLETE



SENSE AMPS BIASED NEAR  $V_s$

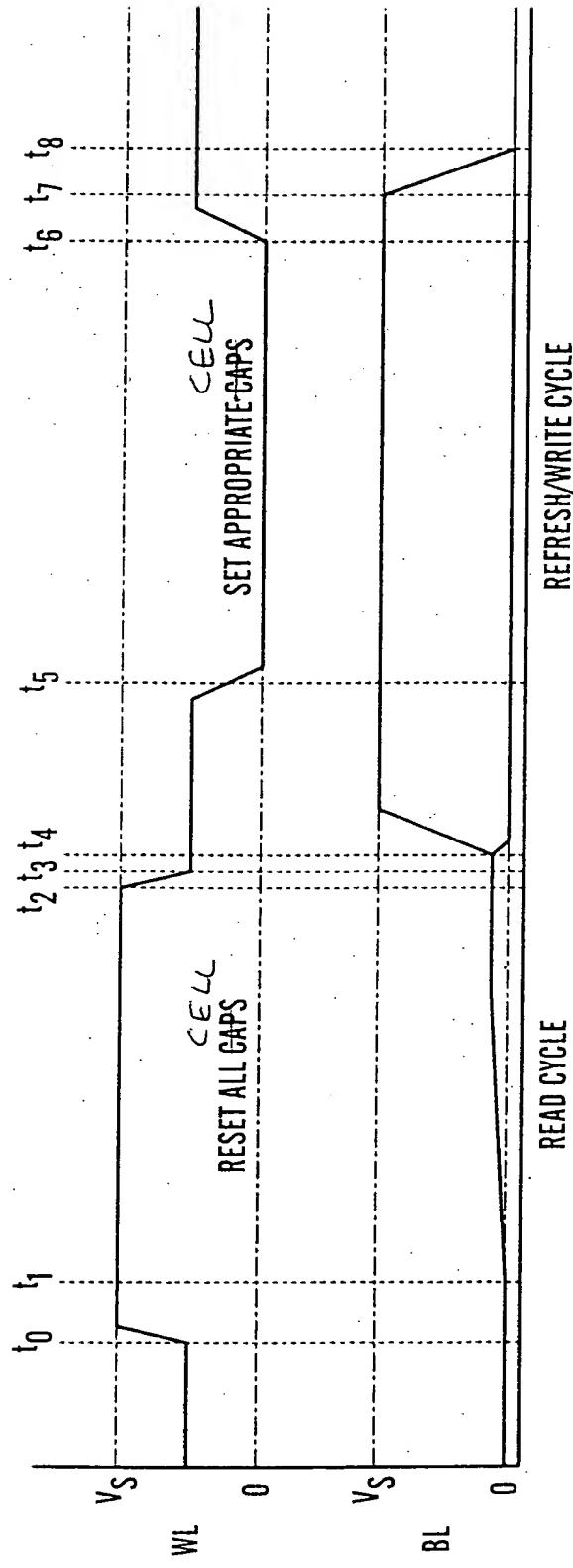


Fig. 5